

On the Addition of Hydrosilanes to α,β -Unsaturated
Acids and Their Esters

SOV/79-29-9-26/76

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute
of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: September 4, 1958

Card 3/3

SADYKH-ZADE, S.I.; SULTANOV, N.T.

New method of synthesizing α , - β -chlorostyrenes by the direct
chlorination of styrene. Azerb.khim.zhur. no.5:33-36 '60.
(MIRA 14:8)

(Styrene) (Chlorination)

SHIKHMAMEDBEKOVA, A.Z.; SEVOST'YANOVA, N.A.; SADYKH-ZADE, S.I.

Investigating the process of dehydrogenation of butylbenzene into
(butenyl) benzene. Azerb.khim.zhur. no.5:37-46 '60. (MIRA 14:8)
(Benzene) (Butene)

SADYKH-ZADE, S.I.; ASKEROV, A.K.

Alkylation of xylenes with ethylene in the presence of aluminum
chloride (synthesis of ethylxylenes). Azerb.khim.zhur. no.6:39-
43 '60. (MIRA 14:8)

(Xylene) (Ethylene)

SADYKH-ZADE, S.I.; PETROV, A.D.

Direct synthesis of organosilicon compounds. Trudy Inst.khim.
AN Azerb.SSR 18:107-132 '60. (MIRA 14:9)
(Silicon organic compounds)

SADYKN-ZADE, S. I.

S. 1700

AUTHORS:

Belardin, A. A., Litvin, A. D., Markov, G. M.,
Gerasimov, A. G., Tolstikov, N. S.,
Leymovich, A. G., Tolstikov, N. S.

TITLE:

Synthesis of alkylation-activated alkenes and their
denaturation

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol. 29, No. 1, pp. 17-
91 (USSR)

ABSTRACT:

Catalytic denaturation of isobutylene over a mixed
oxide catalyst (A) at 200-225°C in the presence of
yields divinylbenzene and ethylstyrene (50% of each).
ation of alkenes in the mixture (50% of each).
styrene (50% of each) and ethylstyrene (50% of each).
(50% of each). 1 ml. of 0.1 N H₂SO₄ in isobutylene
added with stirring, followed by addition of 10 ml. of
methylalcohol. The mixture was heated at 200-225°C
to 60 for 2 hours. Distillation of the mixture produced
two fractions. The first fraction, which contained
methylalcohol, was removed, and the second fraction, (1),

Card 1/4

ASSOCIATION:

N. D. Zelinskiy Institute of Organic Chemistry of the
Academy of Sciences of the USSR (Institut organicheskoy
khimii imeni N. D. Zelinskogo AN SSSR)

SUBMITTED: January 21, 1959

Card 1/4

S/081/61/000/019/059/085
B117/B110

AUTHORS: Shikhmamedbenova, A. Z., Sevost'yanova, N. A., Sadykh-zade, S. I.

TITLE: Study of the dehydrogenation process of butyl benzene in butenyl benzene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 322, abstract 19L20 (Azerb. khim. zh., no. 5, 1960, 37 - 46)

TEXT: Equilibrium constants and equilibrium composition were calculated for the dehydrogenation of secondary $C_4H_9C_6H_5$ to secondary butenyl benzene (I) at 450 - 700°C both without dilution and with dilution by water vapor in molar ratios from 1:9 to 1:15. The activity of the industrial catalysts k-12 (K-12), k-16 (K-16), styrene contact as well as k-67 (K-67) during this reaction at 540 - 630°C was examined. On hydrogenation upon K-67 the yield of I amounts to 16 - 17% at 580°C and at a molar dilution of 1:12. It has chiefly the structure of α -ethyl styrene and contains α , β -dimethyl styrene impurities. [Abstracter's note: Complete translation.]
Card 1/1

SADYKH-ZADE, S. I., Doc Chem Sci -- "Catalytic methods of
the synthesis of silico-organic compounds ^{with} ~~having~~ carbo-
functional ^{groups} ~~radicals~~." Mos, Pub House of Acad Sci USSR,
1961. (Acad Sci USSR. Inst of Org Chem im N. D. Zelinskiy)
(KL, 8-61, 230)

S/661/61/000/006/011/081
D205/D302

AUTHORS: Nikishin, G. I., Petrov, A. D. and Sadykh-Zade, S. I.

TITLE: Behavior of dichloroalkanes and dichloroalkenes in the conditions of direct synthesis

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedeny; trudy konferentsii, no. 6, Doklady, diskussii resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len., 1958. Leningrad. Izd-vo AN SSSR. 1961, 71-72

TEXT: A discussion of the lecture in no. 1, p. 68, of the Proceedings of this Conference, in which A. L. Klebanskiy (VNIISK, Leningrad), Yu. K. Yur'yev (MGU), V. F. Mironov (IOKh, AN SSSR, Moscow) and B. I. Sokolov (Angarsk) took part. The main theme of the discussion was the extension of the synthesis performed by the authors, in which a 5-membered heterocyclic compound containing Si and a multiple bond was prepared - a silicon analogue of thiophen. V. F. Mironov has stated that his attempts in this direction

Card 1/2

Behavior of dichloroalkanes ...

S/661/61/000/006/011/081
D205/D302

proved unsuccessful.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR,
Moscow (Institute of Organic Chemistry, Academy of
Sciences USSR, Moscow)

Card 2/2

158220

S/081/62/000/018/056/059
B168/B166

AUTHORS: Shikhiyev, I. A., Aliyev, M. I., Sadykhzade, S. I., Shchegol',
Sh. S., Tatliyev, S. B., Akhundova, G. Yu., Krasnokutskiy,
V. P., Guseynova, M. A., Mukharamova, Kh. F., Kurbanaliyeva,
T. Kh., Nikolayeva, L.

TITLE: Synthesis and use of silico derivatives of naphthenic acids
in the production of divinylstyrene rubber

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1962, 559, abstract
13P485 (Azerb. khim. zh., no. 5, 1961, 65 - 68 [summary in
Azerb.])

TEXT: Dimethyldichlorosilane reacting with naphthenic acids in the presence
of triethylamine produces dimethyldicarboxy-bis-cycloalkylsilane
($(CH_3)_2Si(COOC_{10}H_{20})_2$). The product was used as filler for butadienestyrene
rubber instead of lubricating oil 18. The Defoe number of the raw buta-
dienestyrene rubber was 2000, thermal plastification time 40 min, Defoe
number of the plasticized butadienestyrene rubber 1100, tensile strength
Card 1/2

Synthesis and use of ...

S/081/62/000/018/056/059
B168/B186

250 kg/cm², elasticity 31%, relative elongation 522% and permanent elongation 16%. [Abstracter's note: Complete translation.]

✓B

Card 2/2

SHIKHIYEV, I.A.; ALIYEV, M.I.; SADYKHZADE, S.I.; SHCHEGOL', Sh.S.;
AKHUNDOVA, G.Yu.; KRASNOKUTSKIY, V.P.; GUSEYNOVA, M.A.;
MUKHARAMOVA, Kh.F.; KURBANALIYEVA, T.Kh.; NIKOLAYEVA, L.

Synthesis and use of silicon naphthenic acids in the production
of butadiene-styrene rubber. Azerb.khim.zhur. no.5:65-68
'61. (MIRA 15:5)

(Naphthenic acids) (Silicon organic compounds)
(Rubber, Synthetic)

ASKEROV, A.K.; SADYKH-ZADE, S.I.; MUSTAFAYEVA, P.R.

Production of vinyl- and -methylvinyltoluenes by the catalytic
dehydrogenation of ethyl- and isopropyltoluenes. Azerb.khim.zhur.
no.6:51-59 '61. (MIRA 15:5)

(Styrene) (Toluene) (Dehydrogenation)

SADYKH-ZADE, S.I.

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PHASE I BOOK EXPLOITATION

SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhani, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Silkuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

Materials of the Scientific Conference (Cont.)

SOV/6195

- Vartanyan, S. A., S. K. Pirenyan, and G. A. Musakhanyan.
Polymerization and Reaction Mechanism of Acetylene in Vinyl
Acetylene 192
- Mamedov, Shchamkhal, and A. Rzayev. Investigation of Simple
Glycol Esters and Their Derivatives: Synthesis of Simple
Ester Derivatives of Methylene Glycol 223
- Azatyan, V. D. Synthesis and Conversion of Cyclooctotetraene 241
- Iagidze, R. M. Investigation of the Condensation Reaction of
Acetic Esters of 1,3- and 1,4-Butanediols and γ -Acetylenic
Glycols With Aromatic Hydrocarbons in the Presence of
Anhydrous Aluminum Chloride 252
- Sadykh-Zade, S. I. Direct and Organometallic Synthesis of
Organosilicon Compounds With Functional Groups. (Institut
khimii, Akademiya nauk Azerbaydzhanskoy SSR) 279
- An industrial method of synthesizing organosilicon compounds

Card 5/11

2/2

S/081/62/000/024/051/052
B166/B186

AUTHORS: Shikhmamedbekova, A. Z., Sadykh-zade, S. I.

TITLE: Synthesis and polymerization of 2-phenylbutadi-1,3-ene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24 (II), 1962, 1061,
abstract 24R198 (Azerb. khim. zh., no. 1, 1962, 73-77
[summary in Azerb.])

TEXT: 2-Phenylbutadi-1,3-ene (I) was synthesized in two ways: (1) from acetophenone and vinyl-magnesium-bromide, followed by decomposition of the complex thereby produced with NH_4Cl solution and then by dehydration of the methylvinyl-phenyl-carbinol; (2) from α -methylstyrene and formaldehyde followed by pyrolysis of the 2-phenyl-4-acetoxide-1-butene thus produced at 500°C , 20 mm Hg. I was polymerized over catalytic system $\text{Al}-(\text{iso-C}_4\text{H}_9)_3-\text{TiCl}_4$ and emulsion copolymerization of I and divinyl was also carried out. [Abstracter's note: Complete translation.]

Card 1/1

ASHIMOV, M.A.; SHCHEGOL', Sh.S.; SADYKH-ZADE, S.I.; ASKEROV, A.K.;
BUKH, Yu.D.

Using azolyat-A as an emulsifier in the emulsion polymerization
of rubber. Sbor. nauch.-tekhn. inform. Azerb. inst. nauch.-tekhn.
inform. Ser. Nefteper. i khim. prom. no.2:3-14 '62.

(MIRA 18:9)

SADYKH-ZADE, S.I.; PETROV, A.D.

Synthesis and reactions of silicocolefin oxides. Azerb.khim.zhur.
no.5:105-117 '62. (MIRA 16:5)
(Silicon organic compounds) (Olefins) (Oxides)

SADYKH-ZADE, S.I., KASUMOV, YE.M.

"Die anlagerung von siliciumhydriden an acetylenkohlenwasserstoffe
und deren abkömmlinge."

Report submitted to the 2nd Dresden Symp. on Organic and Non-Silicate
Silicon Chemistry.
Dresden, East Germany 26-30 March 1963

SADYKH-ZADESI.

JUN 25 1963

SOV/6195

PHASE I BOOK EXPLOITATION

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhani, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Silkuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

Card 1/11

Materials of the Scientific Conference (Cont.)

SOV/6195

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

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PHYSICAL CHEMISTRY

Tsitsishvili, G. V., and Ye. D. Rosebashvili. Use of the Magnetic Method in Studying Some Complex Cobalt Compounds 5

Nanobashvili, Ye. M., and L. V. Ivanitskaya. The Effect of γ -Radiation on Colloidal Solutions of Gallium, Indium, and Thallium Sulfide 23

Zul'fugarov, Z. G., Y. Ye. Smirnova and S. G. Muradova. The Effect of the Conditions of Synthesis and Formation on the

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Materials of the Scientific Conference (Cont.)

SOV/6195

Vartanyan, S. A., S. K. Pirenyan, and G. A. Musakhanyan.
Polymerization and Reaction Mechanism of Acetylene in Vinyl
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Glycol Esters and Their Derivatives: Synthesis of Simple
Ester Derivatives of Methylene Glycol 223

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Acetic Esters of 1,3- and 1,4-Butanediols and γ -Acetylenic
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Anhydrous Aluminum Chloride 252

Sadykh-Zade, S. I. Direct and Organometallic Synthesis of
Organosilicon Compounds With Functional Groups. (Institut
khimii, Akademiya nauk Azerbaydzhanskoy SSR) 279

An industrial method of synthesizing organosilicon compounds
Card 5/11

Materials of the Scientific Conference (Cont.)

SOV/6195

with functional groups Cl and CN in the alkyl or aryl chains has been investigated to produce new silicon polymers which do not have the defects of high brittleness and low mechanical and adhesive strengths. The first organosilicon monomers synthesized with one double bond polymerized only if Cl was on the Si atom and Si-O-Si bonds were formed. Double bond polymerization was accomplished by synthesizing butadienylsilanes from Grignard reagents (of α and β halogens) and acrylic and crotonic aldehydes. These butadienylsilanes added easily to alkyl lithium compounds to produce intermediates for the synthesis of organosilicon compounds. A 1% solution of H_2PtCl_6 in isopropyl alcohol catalyzed the polymerization of the butadienylsilanes. β -Trichlorosilylpropionitrile (I) was synthesized by reacting β -chloropropionitrile (II) with Si-Cu at 370°C; yield: 20% on II. The latter synthesis showed possibilities of other simple and direct syntheses by this method.

Matsuyan, S. G. Investigation of Unsaturated α -Keto Alcohols and Their Esters

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Card 6/11

SADYKHZADE, S.I.; SHIKHMAMEDBEKOVA, A.Z.; YUL'CHEVSKAYA, S.D.;
SALAKHOVA, S.Kh.; RZAYEVA, A.S.

Condensation of vinylacetylene with α -chloroethers.
Azerb. khim. zhur. no.2:37-44 '63. (MIRA 16:8)

SADYKHZADE, S.I.; MAMEDOV, Mageram; GASANOVA, F.A.

Synthesis of silicooléfin oxides by the addition of silane hydrides to
unsaturated halohydrins and their oxides. Azerb.khim.zhur. no.4:85-90
'63. (MIRA 17:2)

SADYKHZADE, S.I.; YUL'CHEVSKAYA, S.D.; NOVROZOVA, R.D.; SALIMOV, M.M.

Addition of α -chloro ethers to vinylisopropenylacetylene.
Azerb. khim. zhur. no. 5:45-49 '63 (MIRA 17:8)

SADYKHZADE, S.I.; MAMEDOV, T.I.; SALAKHOVA, S. Ya.

Copolymerization of pentenes with 2-methyl-1, 3-butadiene.
Azerb. khim. zhur. no.5:51-54 '63 (MIRA 17:8)

SULTANOV, N.T.; ALIYEVA, M.A.; SADYKHZADE, S.I.

Chlorination of methyl methacrylate. Azerb.khim.zhur. no.6:
23-27 '63. (MIRA 17:3)

ACCESSION NR: AP4022012

S/0249/63/019/012/0025/0031

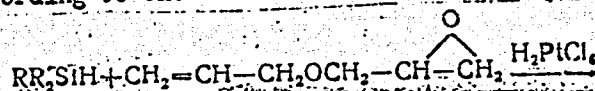
AUTHORS: Sadykh-Zade, S. I.; Sultanov, R.; Gasanova, F. A.

TITLE: The incorporation of hydrosilicones into glycidolallyl ester and some transformations of the obtained additional products (Presented by Academician A. M. Kulihev of the Azerbaydzhan Academy of Sciences)

SOURCE: AN AzerbSSR. Doklady, v. 19, no. 12, 1963, 25-31

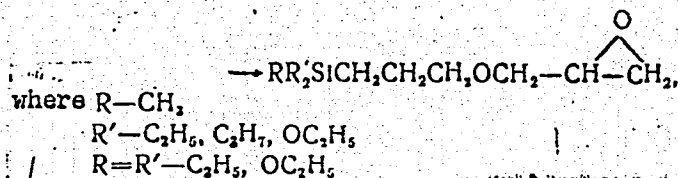
TOPIC TAGS: epoxides, epoxy derivative, glycidol, glycidolallyl ester, silane hydrosilicone, alkylsilicone, trialkylsilane, alkoxyasilane, catalyst, chloroplatinic acid, organosilicon compound, alkene

ABSTRACT: A method presented here permits the synthesis of siloxanes by catalytic incorporation of silanes and disilanes into glycidolallyl ester. It was shown that trialkylsilanes, alkoxyasilanes, and disilanes of the $HR'SiOSiRR'H$ type are readily linked to glycidolallyl ester at atmospheric pressure in the presence of chloroplatinic acid, according to the reaction



Card 1/3

ACCESSION NR: APL022012



Eleven new organosilicon compounds were synthesized. The process is exemplified by the technique of gamma-glycidol-oxypropyltriethylsilane synthesis. In a flask provided with a reflux condenser and a thermometer were placed 23.3 gm of freshly distilled glycidolallyl ester. The flask was then heated to 90C, and to it were added 3 drops of a 0.1 normal solution of chloroplatinic acid in isopropyl alcohol, followed by gradual admixture of 21.6 gm of triethylsilane. When 6 ml of (C₂H₅)₂SiH were added, the temperature rose spontaneously to 130C. After the non-reacted components were removed by vacuum distillation, 16.4 gm of the desired compound were produced. Boiling point of this compound was 120-121C.

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- 12 (2/233) -

ACCESSION NR: AP4022012

It was established that the trialkylsilanes were linked to the glycidolallyl ester according to Farmer's law. Orig. art. has: 13 formulas and 1 table.

ASSOCIATION: INKhp im. Yu. G. Mamedaliyeva (INKhp)

SUBMITTED: 13Nov63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: CH

NO REF SOV: 006

OTHER: 000

Card

3/3

MAMEDOV, M.; GADYKHZADE, S.I., red.

[Vinyl chloride] Vinil'khlorid. Baku. Zerneshr, 1964.
127 p. (MIRA 18:1)

SADYKHZADE, S.I.; SULTANOV, R.; KHALILOVA, E.M.

Addition of silicon hydrides to β -propargylhydroxy
propionitrile. Azerb. khim. zhur. no.1:57-62 '64.
(MIRA 17:5)

MAMEDOV, Shamkhal; SULTANOV, N.T.; SADYKHZADE, S.I.; KHODZHAYEVA, Sh.Ya.;
PISHNAMAZZADE, B.F.

Alkylation of α -chloromethylalkyl ethers with methallyl
chloride. Azerb. khim. zhur. no.1:81-87 '64.

(MIRA 17:5)

L 24688-65 EWT(m)/EFF(c)/EWP(j)/T Pg-4/Pr-4 RM

ACCESSION NR: AP4049426

S/0316/64/000/001/0097/0103

AUTHOR: Khalilova, E. M.; Sultanov, R.; Sady*khzade, S. I.

TITLE: Synthesis of silicon-containing unsaturated acetates

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 1, 1964, 97-103

TOPIC TAGS: acetate, unsaturated acetate, silicon containing acetate

ABSTRACT: Silicon-containing acetates and diacetates were prepared by reacting silicon hydrides with unsaturated compounds containing functional groups at atmospheric pressure in the presence of 0.1 N H_2PtCl_6 in isopropyl alcohol as a catalyst. The acetates and their properties are listed in two extensive tables which include the structural formula and data on boiling point, yield and elemental analysis. Under these experimental conditions, the Si hydrides add at the triple bond, which is not in accord with Markovnikov's rule. Orig. art. has: 1 figure, 2 tables and 14 chemical structures.

ASSOCIATION: none

SUBMITTED: 00

ENGL: 00

SUB CODE: OC

Card 1/1

NO REF SOV: 006

OTHER: 002

MAMEDOV, Magerram; AKHMEDOV, I.M.; SADYKHADE, S.I.

Addition of silicon hydrides to 2-chloromethyl-[2,2,1]-
bicyclo-5-heptene. Azerb. khim. zhur. no. 2:46-50 '65.
(MIRA 18:12)

1. Institut neftekhimicheskikh protsessov AN AzerSSR. Sub-
mitted May 12, 1964.

L 38517-65 EPF(c)/EPR/EWP(j)/EWT(m)/T Pc-Li/Pr-Li/Ps-Li RM/WM

ACCESSION NR: AP5007802

S/0316/64/000/002/0057/0062

AUTHOR: Sadykhzade, S. I.; Mamedov, T. I.; Salakhova, S. Ya.; Khudayarov, I. A.

TITLE: Ionic polymerization of pentenes

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28
B

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 2, 1964, 57-62

TOPIC TAGS: polyolefin synthesis, ionic polymerization, pentene polymerization, Ziegler catalyst, batch polymerization, catalytic dehydration, olefin synthesis

ABSTRACT: The batch polymerization of pentene isomers at atmospheric pressure on the Ziegler catalyst triisobutylaluminum-titanium tetrachloride was studied experimentally to determine the effects of conditions, catalyst composition and monomer structure on yield and polymer properties. 1-Pentene, 3-methyl-1-butene, 2-methyl-1-butene and 2-methyl-2-butene were prepared by catalytic dehydration of n-amyl and isoamyl alcohols and polymerized in n-hexane, n-heptane, isooctane or solvent naphtha solution in a nitrogen atmosphere at 10-70°C, 1:1.8 mole ratios of $Al(C_2H_5)_3/TiCl_4$, 2.3-20.4 g/liter catalyst concentrations and 2-3 mole/liter monomer concentrations. As indicated by selected experimental results, a 1-3 hr. reaction time gave 9.1-59 wt% yields of white

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L 38517-65

ACCESSION NR: AP5007802

and solid elastomers. The highest yield was obtained from 1-pentene at 700 in n-heptane and only the polymer produced from 1-pentene was soluble in toluene on heating. Molecular weights of $6 \cdot 10^5$ for poly-1-pentene and $8.04 \cdot 10^5$ for poly-3-methyl-1-butene were determined. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: 00, LC

NO REF SOV: 005

OTHER: 014

Card

2/2 mp

L 38518-65 EPF(c)/EWP(j)/EMA(o)/EWT(m)/T Po-l/Pr-l RPL RM/JW

ACCESSION NR: AP5007804

S/0316/64/000/002/0097/0102

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AUTHOR: Sultanov, R.; Khalilova, E. M.; Sadykhzade, S. I.

TITLE: Synthesis of unsaturated silicon-containing amines

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 2, 1964, 97-102

TOPIC TAGS: unsaturated amine, heteroorganic compound, organosilicon compound, amine synthesis, alkoxysilane, propargylamine, acetylenic amine, Grignard reagent, decyanoethylation

ABSTRACT: A route was developed for the synthesis of olefinic silico-organic amines by addition of alkyl- or alkoxysilanes to diethylpropargylamine or allyl-(β -cyanoethyl)-propargylamine, after which the physical properties and the reaction of the products with a Grignard reagent were studied. The silanes and acetylenic amines reacted in the presence of H_2PtCl_6 in isopropyl alcohol at atmospheric pressure under reflux. Methyl-diethylsilane and diethylpropargylamine gave 1-methyldiethylsilyl-3-diethylaminopropen-1



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L 38518-65

ACCESSION NR: AP5007804

and the reaction of silane isomers gave 1-methyltetramethylenesilyl-, 1-triethylsilyl-, 1-methyldipropylsilyl-, 1-ethyldipropylsilyl-, 1-methyldiethoxysilyl- and triethoxysilyl-3-diethylaminopropen-1. By reaction of alkyl- or alkoxysilanes with allyl-(δ -cyanoethyl)-propargylamine, 1-methyldiethylsilyl-3-(δ -cyanoethyl)-allylaminopropen-1

(CH_3) (C_2H_5) $\text{SiCH}=\text{CH}-\text{CH}_2\text{N}(\text{CH}_2\text{CH}_2\text{CN})\text{CH}_2\text{CH}=\text{CH}_2$, and 1-methyltetramethylenesilyl-, 1-triethylsilyl-, 1-methyldipropylsilyl-, 1-methyldiethoxysilyl-, and triethoxysilyl-3-(δ -cyanoethyl)allylaminopropen-1 were formed. 1-Methyltetramethylenesilyl-3-(δ -cyanoethyl)-methyltetramethylenesilylpropioaminopropen-1 was produced under similar conditions with twice the amount of methyltetramethylenesilane. Preparation of 1-methyldiethylsilyl-3-diethylaminopropen-1 via (CH_3) (C_2H_5) $\text{SiCH}=\text{CH}-\text{CH}_2\text{OH}$ confirmed the proposed structure. The reaction of 1-methyldiethylsilyl-3-(δ -cyanoethyl)-allylaminopropen-1 with CH_3MgI in ethyl ether gave 1-methyldiethylsilyl-3-allylaminopropen-1 by decyanoethylation. Orig. art. has: 5 formulas and 1 table.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: 0C

NO REF SOV: 002

OTHER: 000

Card 2/2 *nuB*

L 21107-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/PS-4 RPL WW/RM

ACCESSION NR: AP4049433

S/0316/64/000/003/0099/0102

AUTHOR: Mamedov, T.I., Abdurakhmanova, N.M., Sady*khzade, S.I.

TITLE: Copolymerization of pentenes with ethylene and propylene

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 3, 1964, 99-102

TOPIC TAGS: olefin polymerization, ethylene copolymer, propylene copolymer, pentene copolymer, polymerization catalyst

ABSTRACT: Copolymerization of 0.4-0.6 mol 3-methyl-1-butene, 0.5 mol 2-methyl-1-butene, or 0.5 mol 2-methyl-2-butene, with 0.12-0.42 mol ethylene and of 0.5-1.2 mol 2-methyl-1-butene with 0.21-0.5 mol propylene, at atmospheric pressure and 18-70°C gave white, hard polymers, insoluble in organic solvents at 80°C. Titanium tetrachloride and triethylaluminum were used as composite catalysts in various concentrations and ratios for the polymerization (1-4 hrs.) in n-heptane, n-hexane, or isooctane solution, and the resins were precipitated with methanol. X-ray analysis showed the presence of 70% crystalline and 30% amorphous polymer; this result, however, was not related to a specific chemical composition or reaction conditions. An infrared spectrum is presented for the copolymer of 3-methyl-1-butene + ethylene. Ethylene copolymers were obtained as powders, and propylene copolymers as fibrous solids. Orig. art. has: 1 table and 2 Figures.

Card 1/2

L 21107-65

ACCESSION NR: AP4049433

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: OC

NO REF SOV: 004

OTHER: 000

Card 2/2

L-19732-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4/
 Ps-4 IJP(c) RM/JD
 ACCESSION NR: AP4049802 S/0316/64/000/004/0047/0053

THOR: Gasanova, F. A.; Sultanov, R.; Sady*khzade, S. I.

TITLE: Synthesis of silicon-containing chlorohydrins and their oxides 3

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1964, 47-53

TOPIC TAGS: silicon chlorohydrin, silicon hydride, silane, silicon chlorohydrin oxide
 27 21

ABSTRACT: This is a continuation of previous work by the same authors on methods of synthesizing silico-olefin oxides. It was found that silicon hydrides and dihydrides, in the presence of platinum catalysts, readily react with 3-allyloxy-1-chloropropanol-2 and glycidallyl ether forming the corresponding silicon-containing chlorohydrins and their oxides. By verifying the structure of these compounds with the aid of the opposite synthetic reaction it was proven that silicon hydrides under the above conditions become bonded to 3-allyloxy-1-chloropropanol-2 and to the glycidallyl ether only at the C-C double bond, according to Farmer's rule. The best yields of silico-organic oxides are obtained by directly compounding silicon hydrides with glycidallyl ether rather than with 3-allyloxy-1-chloropropanol-2 with subsequent dehydrochlorination. The following compounds were synthesized: sym-di-(gamma-glycidoxypropyl)-dimethyldiethyldisiloxane;

Card 1/2

L 19732-65

ACCESSION NR: AP4049802

3-methyldipropylsilylpropoxy-1-chloro-2-trimethylsiloxypropane; 3-methyldiethylsilylpropoxy-1-ethoxypropanol-2; 3-methyldiethylsilylpropoxy-1-diethylaminopropanol-2; 2-methyl-2-ethyl-4-methyldiethylsilylpropoxy-methyldioxolan-1,3; 3-methyltetramethylenesilylpropoxy-1-chloropropanol-2; 3-methyltetramethylenesilyl-1-glycidoxypropane; and 3-triethylsilyl-1-glycidoxypropane. Orig. art. has: 8 chemical formulas and 1 table.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: OC

NO REF SOV: 004

OTHER: 000

Card

2/2

L 33243-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5005518

8/0316/64/000/005/0031/0036

AUTHOR: Askerov, A.K.; Kamysheva, T.P.; Sadykhzade, S.I.; Ismailzade, I.G.; Mamedov, I.M.

TITLE: The order of orientation in alkylation reactions of toluene by ethylene and propylene in the presence of aluminum chloride

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 5, 1964, 31-36

TOPIC TAGS: toluene alkylation, alkylation reaction, ethylene, propylene, alkyl orientation, olefin addition, alkyltoluene

ABSTRACT: The authors attempted to determine the reasons for the contradictory reports on the isomeric composition of the alkylation products of toluene and to study the effect of temperature, amount of catalyst, molar ratio, the character of the reaction components and the rate of olefin addition on the order of orientation of the alkyl groups on the benzene ring. The alkylates were studied by oxidation with potassium permanganate and nitric acid - which method proved unsuitable for this purpose - and by spectral analysis. It was found that the order of substitution at the benzene ring is not subject to the known rule but depends on the reaction conditions, concentration of the catalyst

Card 1/2

L 33243-65

ACCESSION NR: AP5005518

and the nature of the reaction components. At low temperatures (20-50 C) and low AlCl_3 concentrations (2-3% AlCl_3 for ethyltoluene), the alkyl groups tended to locate at the o-position; at higher temperatures (80 C) and higher AlCl_3 concentrations (10-15%), they added at the m-position. A gradual change from ortho to meta occurred between 50 and 80 C. Further increases in temperature or AlCl_3 concentration had no effect on the isomeric composition. The proportion in p-position did not change significantly under these conditions. Increasing the molar ratio (ethylene:toluene) from 0.2 to 1 decreased the amount of orthoisomer and increased that of para; decreasing the rate of addition of the ethylene by 2/3 decreased the ortho and increased the meta orientation. Changes in reaction parameters (except for temperature) had no effect on the isomeric composition of isopropyltoluene. Under mild alkylating conditions (with thylene) the usual law of substitution at the benzene ring was observed to some degree. An effect of the nature of the olefin was seen in that, under identical conditions, ethyltoluene contained at most 45% while isopropyltoluene contained 75% meta isomer; this latter tendency might be due to steric hindrance at the o-position. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 008

ENCL: 00

OTHER: 004

SUB CODE: OC

Card 2/2

L 34194-65 EWT(m)/EPF(c)/EWP(j)/T Pc-l/Pr-l RM

ACCESSION NR: AP5007524

S/0316/64/000/006/0029/0042

AUTHOR: Sadykhzade, S. I.; Rzayeva, A. S.

TITLE: Synthesis and polymerization properties of the vinyl esters of alkyl- and alkoxy-substituted derivatives of phenoxyacetic acid

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 6, 1964, 39-42

TOPIC TAGS: phenoxyacetic acid, vinyl alkylphenoxyacetate, vinyl alkoxyphenoxyacetate, polyester synthesis, vinyl ester polymerization

ABSTRACT: The article is devoted to the synthesis of vinyl esters of alkyl- and alkoxy-substituted derivatives of phenoxyacetic acid and their polymerization properties in relation to the nature and position of the substituent in the aromatic ring. It was shown that in the presence of mercury salts, these derivatives are readily vinylated by vinyl acetate to form the corresponding vinyl esters:



where
R=H; o=, m=, p=

R=H; o=, m=, p=; n=CH₃; o=, m=, p=; n=CH₂O.

Card 1/2

L 34194-65

ACCESSION NR: AP5007524

It was found that the yields of the polymeric products of the vinyl esters obtained can be arranged in the following decreasing order in relation to the nature and position of the substituent:



The physicochemical constants of the vinyl esters obtained are tabulated, and the procedure used in the synthesis is described. Orig. art. has: 3 tables and 1 formula.

ASSOCIATION: None

SUBMITTED: 00

EWCL: 00

SUB CODE: 0C

NO REF SOV: 002

OTHER: 007

Card 2/2

L 11325-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RPL DJ/RM
 S/0249/64/020/006/0025/0027
 ACCESSION NR: AP4045056

AUTHOR: Sady*kh-Zade, S. I.; Gasanova, F. A.; Sultanov, K.;
 Bokovoy, A. P.; Litvinova, O. V.; Ponomarenko, V. A.

TITLE: Synthesis of [(epoxyamino)organo]silanes

SOURCE: AN AzerbSSR. Doklay*, v. 20, no. 6, 1964, 25-27

TOPIC TAGS: silicone, silane, organosilicon compound

ABSTRACT: A study of the synthesis of organosilicon monomers contain-
 ing epoxy groups in organic substituents on silicon has been contin-
 ued. The feasibility was shown of synthesizing [(epoxyamino)organo]-
 silanes by addition of alkyl(alkoxy)silanes to alkenylepoxyamines in
 the presence of chloroplatinic acid. Twelve [(epoxyamino)organo]sil-
 anes were prepared in 8-57.9% yields; their physical constants are
 tabulated in the original article. Most of the new compounds polym-
 erize on standing. Their polymerization properties will be described
 in a separate paper. Addition of 1,3-diethyl-1,3-dimethyldisiloxane
 to diallylepoxyamine in the presence of chloroplatinic acid formed in
 quantitative yield a viscous oil polymer which sets on standing!

Card 1/2

L 11325-65

ACCESSION NR: AP4045056

[$C_{15}H_{33}Si_2O_2N$]; the average molecular weight is 1780. Orig. art. has: 1 table and 10 formulas.

ASSOCIATION: Institut nefitkhimicheskikh protessov (Institute of Petrochemical Processes)

SUBMITTED: 25Feb64

ATD PRESS: 3106

ENCL: 00

SUB CODE: OC, IC

NO REF SOV: 005

OTHER: 001

Card 2/2

L 12977-65 ENT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RPL RM

ACCESSION NR: AP4037058

S/0079/64/034/005/1393/1395

AUTHOR: Sady*kh-zade, S. I.; Shikhiyev, I. A.; Khalilova, E. M.

TITLE: The addition of silane hydrides to acetylenic alcohols and their derivatives.

SOURCE: Zhurnal obshchey khimii, v. 34, no. 5, 1964, 1393-1395

TOPIC TAGS: addition reaction, silane hydride addition product, acetylenic alcohol addition product, propargyl addition product, butyndiol silane hydride adduct, cyanoethylation, triple bond addition reaction.

ABSTRACT: The addition of silane hydrides to propargyl alcohol, butyndiol and propargyl bromide was effected for the first time. It was established that the silane hydrides in the presence of 0.1N chloroplatinic acid add to the propargyl alcohol and butyndiol only at the triple bond:



SiR₃

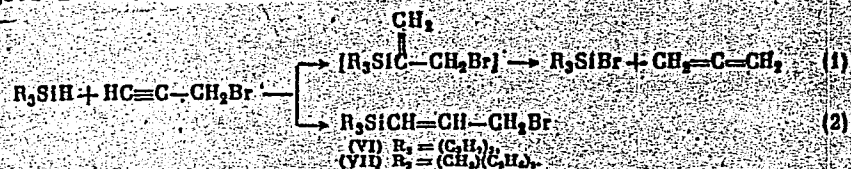
(II) R₃ = CH₃(C₂H₅)₂
(III) R₃ = CH₃(n-C₄H₉)₂

Card 1/3

L 12977-65

ACCESSION NR: AP4037058

1-methyldiethylsilylpropen-1-ol-3 (I), 2-methyldiethylbuten-2-diol-1,4 (II) and 2-methyl-n-propylsilylbuten-2-diol-1,4 (III) were prepared. I and II were cyano-ethylated to 1-methyldiethylsilyl-3-cyanopropoxypropen-1 and 2-methyldiethylsilyl-1,4-dicyanopropoxybuten-2, respectively. Reaction of silane hydrides with propargyl bromide goes in two directions:



3-bromo-1-tripropylsilylpropen-1 and 3-bromo-1-methyldiethylsilylpropen-1 were obtained by this reaction. Orig. art. has: 3 sets of equations.

ASSOCIATION: Institut neftekhimicheskikh protsessov AN Azerbaydzhauskoy SSR
(Institute of Petrochemical Processes Academy of Sciences Azerbaydzhauskoy SSR)

Card 2/3

L 12977-65
ACCESSION NR: AP4037058

SUBMITTED: 27Dec61

ENCL: 00

SUB CODE: IC

NO REF SOV: 004

OTHER: 003

Card 3/3

SULTANOV, N.T.; ALIYEVA, M.A.; KODZHAYEVA, Sh.Ya.; SADYKHZADE, S.I.

Anomalous chlorination of isobutylene. Azerb. khim. zhur. no.1:35-38
'65. (MIRA 18:7)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

A L 11583-66 EWT(m)/T/EWP(J) RM

ACC NR: AP5028889 SOURCE CODE: UR/0316/65/000/004/0034/0037

AUTHOR: Mamedov, T. I.; Ibragimova, L. S.; Mirzakhanov, I. S.; Sadykhzade, S. I.

ORG: INKhP AN AzerbSSR

TITLE: Polymerization of 1-hexene over a complex catalyst

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1965, 34-37

TOPIC TAGS: polymerization, polymerization catalyst, polymerization kinetics, polymer, synthetic material

ABSTRACT: A systematic study of polymerization of 1-hexene was carried out at atmospheric pressure 0-50°C with the complex ionic catalyst $Al(C_2H_5)_3 + TiCl_4$. Normal pentane was used as a solvent. The molar ratios of $Al(C_2H_5)_3$ to $TiCl_4$ were 1 and 2. The product polymers were soluble in *n*-pentane, toluene, cyclohexane, decane, and carbon tetrachloride. The yield of polymer increased with increases in temperature and the quantity of complex catalyst. An increase in reaction temperature was reflected in a reduction in the molecular weight of the polymer product. The conversion of 1-hexene to a polymer as a function of polymerization temperature is shown in fig. 1. The yield of poly-1-hexene as a function of concentration of the complex catalyst is shown in fig. 2.

Card 1/2

L 11583-66

ACC NR: AP5028889

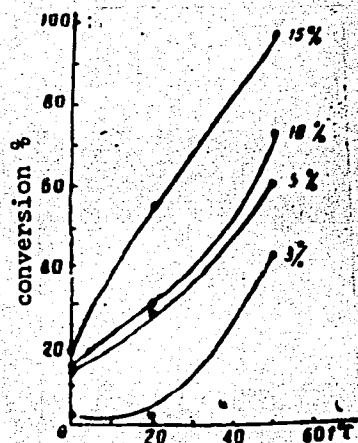


Fig. 1. The yield of poly-1-hexene as a function of reaction temperature.

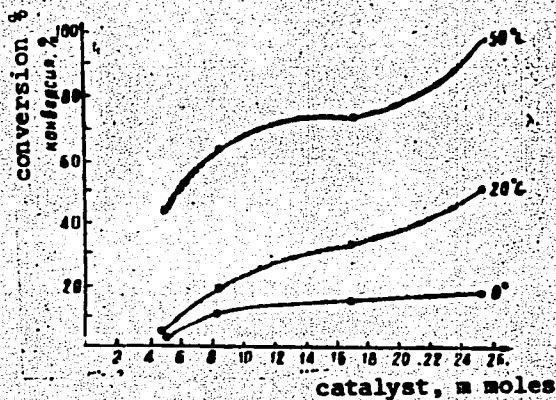


Fig. 2. The yield of poly-1-hexene as a function of concentration of the complex catalyst.

Orig. art. has: 3 figures, 1 table.

SUB CODE: 07//

SUBM DATE: 19Jun64/

ORIG REF: 007/

OTH REF: 002

Card 2/2 HW

L 62792-65 EWT(m)/EMP(j) Pc-4 JAJ/RM

ACCESSION NR: AP5018353

UR/0316/65/000/002/0046/0050

AUTHOR: Mamedov, M.; Akhmedov, I. M.; Sadykhzade, S. I.

TITLE: Addition of silicon hydrides to 2-chloromethylbicyclo-[2,2,1]-hept-5-ene.

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 2, 1965, 46-50

TOPIC TAGS: organosilicon compound, organic synthesis

ABSTRACT: The article presents the results of the investigation of addition reactions of different silicon hydrides to 2-chloromethylbicyclo-[2,2,1]-hept-5-ene in the presence of chloroplatinic acid. It was shown that silicochloroform, alkyl-dichlorosilanes, alkylsilanes and alkylalkoxysilanes are easily added to the double bond of 2-chloromethylbicyclo-[2,2,1]-hept-5-ene at atmospheric pressure in the presence of H_2PtCl_6 according to the following scheme:



25-78% of the theoretical yield

when

$R = CH_3, C_2H_5; R' = Cl, OC_2H_5$

Card 1/2

$R = R' = C_2H_5, OC_2H_5, Cl$

L 62792-65

ACCESSION NR: AP5018353

The reactivity of the investigated silicon hydrides correspond to the following series order:



It is apparent that silicon hydrides with electronegative groups are more reactive in the addition to the double bond of chlorine containing bicyclic compounds than trialkylsilanes. Orig. art. has 1 table.

ASSOCIATION: INKhP AN Azerb. SSR

SUBMITTED: 12May64

ENCL: 00

SUB CODE: OC

NO REF SOV: 003

OTHER: 000

Card 2/2

L 1900-66 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5021552

UR/0286/65/000/013/0019/0019

661.718.1.5

AUTHOR: Sadykh-Zade, S. I.; Sultanov, R. A. o.; Mamedova, B. A. k.; Ashurov, B.
D. A. o.

TITLE: Preparative method for unsaturated organosilicophosphorus compounds.
Class 12, No. 172320

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 19

TOPIC TAGS: organosilicon compound, organophosphorus compound, organic synthesis

ABSTRACT: An Author Certificate has been issued for a preparative method for unsaturated organosilicophosphorus monomers having hydrolyzable substituents at the silicon atom. Dialkyl propargylphosphonates are refluxed with alkyl(alkoxy)silanes in the presence of chloroplatinic acid. [SM]

ASSOCIATION: Institut neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR
(Institute of Petrochemical Processes, AN Azerbaydzhah SSR)

SUBMITTED: 23Apr64
NO REF SOV: 000

ENCL: 00
OTHER: 000

SUB CODE: OC, IC
ATD PRESS: 4088

Card 1/1

L 51524-65 EWT(m)/EPP(c)/EPR/EMP(j)/T PC-L/Pr-L/Pg-L RM/WW
 UR/0286/65/000/009/0068/0068
 ACCESSION NR: AP5015298 678.621'375 35
 AUTHOR: Kamenskiy, I. V.; Sadykh-zade, S. I.; Guseynov, D. A.; Iskenderov, M. A.;
 Sultanov, R. A.; Mamedov, F. V.
 TITLE: A method for producing resin. Class 39, No. 170670 15
 SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 68
 TOPIC TAGS: resin, amine, thermal stability, polycondensation, furfurol 15
 ABSTRACT: This Author's Certificate introduces a method for producing resin by
 polycondensation of furfurol and amine. The thermal and chemical stability of the
 product are improved by using allylamine. 15
 ASSOCIATION: none
 SUBMITTED: 21May64 ENCL: 00 SUB CODE: INT, CC
 NO REF SOV: 000 OTHER: 000
 Card 1/1

SULTANOV, S.A.; MAMEDALIYEV, S.G.; KHALILOVA, Z.M.

Analysis of epoxyaminonitriles, Zhur. org. khim. 1 no.7:1336
1965. (MIRA 18:11)

1. Institut neftekhimicheskikh protsessov imeni Yu.G.Mamedaliyeva
AN Azerbaydzhanskiy SSR, Baku.

SADYKH-ZADE, S.I. ; SULTANOV, R.; MAMEDOVA, B.A.

Addition of triorganosilanes to vinyl ethynyl- α -furylcarbinol.
Dokl. AN Azerb. SSR 21 no.2:23-27 '65.

(MIRA 18:5)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

L 41577-65 EWT(m)/EPF(c)/E/P(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5008838

S/0079/65/035/003/0461/0466

AUTHOR: Mamedov, M. A.; Akhmedov, I. M.; Guseynov, M. M.; Sadykh-zade, S. I. 29
8

TITLE: Addition of silicon hydrides to dichloralkenes and alkynes

SOURCE: Zhurnal obshchey khimii, v. 35, no. 3, 1965, 461-466

TOPIC TAGS: silicon hydride, silicon organic compound, organic synthesis

ABSTRACT: In a previous work by these authors [Azerb. Khim. zh., 6, 9 (1962)] it was shown that silicon hydrides are joined to chloroprene and isoprene in the presence of a 0.1 normal solution of chloroplatinic acid in isopropyl alcohol primarily in the 1,4 position. It was of interest to investigate alkynes of C_4 composition in the presence of this catalyst. The addition reactions of trialkyl-, alkylidichloro- and trichlorosilane being joined to 1,4-dichloro-2-butene, 3,4-dichloro-1-butene and 1,4-dichloro-2-butene in the presence of H_2PtCl_6 were studied. It was found that in the case of 3,4-dichloro-1-butene, silicon hydrides are joined exclusively according to the Farmer rule. The addition of silicon hydrides to 1,4-dichloro-2-butene results in the formation of anomalous reaction products. Silicon hydrides is joined to 1,4-dichloro-2-butyne at the triple bond. Orig. art. has: 4 figures and 1 table.

Card 1/2

L 41577-65
ACCESSION NR: AP5008838

ASSOCIATION: none

SUBMITTED: 18Nov63

NO REF SOV: 006

ENCL: 00

OTHER: 000

SUB CODE: 0C

ml
Card 2/2 Submitted 18 Nov 63

ASKEROV, A.K.; KAMYSHEVA, T.P.; SADYKHZADE, S.I.; ISMAILZADE, I.G.;
MAMEDOV, F.A.; MAMEDOV, I.M.

Order of orientation in the reaction of alkylation of xylene
isomers with ethylene and propylene in the presence of $AlCl_3$.
Azerb. khim. zhur. no.3:44-48 '65. (MIRA 19:1)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

MAMEDOV, T.I.; IBRAGIMOVA, L.S.; MIRZAKHANOV, I.S.; SADYKHZADE, S.I.

Polymerization of 1-hexene in the presence of a complex catalyst.
Azerb.khim.zhur. no.4:34-37 '65.

(MIRA 18:12)

1. Institut neftekhimicheskikh protsessov AN AzSSR. Submitted
June 19, 1964.

L 06461-67 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AP6029337

SOURCE CODE: UR/0316/66/000/002/0038/0043

AUTHOR: Sadykhzade, S. I.; Babayeva, R. B.

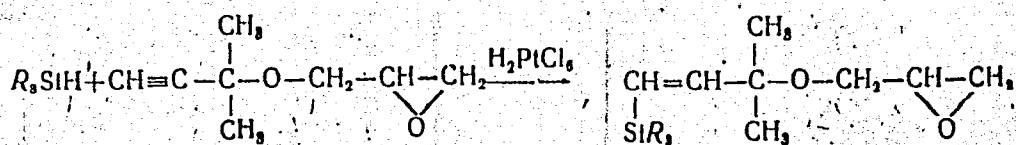
ORG: INKhP AN AzerbSSR

TITLE: Addition of silicon hydrides to 3,3-dimethyl-3-glycidoxy-1-propyne

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 2, 1966, 38-43

TOPIC TAGS: organosilicon compound, epoxide, propyne, *HYDRIDE, CHEMICAL REACTION*

ABSTRACT: The reactions of addition of silicon hydrides to derivatives of 3,3-dimethyl-3-glycidoxy-1-propyne were studied. The reaction was

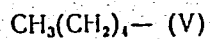
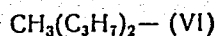
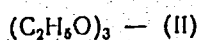
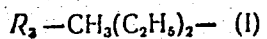


where

Card 1/2

L 05461-67

ACC NR: AP6029337



Hence, silicon hydrides add to the olefins studied at the triple bond, in accordance with Farmer's rule. This order of addition was demonstrated by reverse synthesis. The epoxy compounds obtained polymerize readily in the presence of boron etherate, retaining the double bond and opening the oxygen ring. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 22Nov65/ ORIG REF: 003

Card 2/2 MLE

L 06159-67 EWP(j)/EWT(m) RM

SOURCE CODE: UR/0316/66/000/003/0131/0134

ACC NR: AP6028576

AUTHOR: Khalilova, E. M.; Sadykhzade, S. I.;

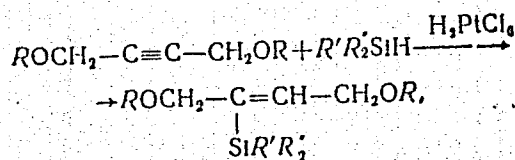
ORG: INKhP AN AzerbSSR

TITLE: Synthesis of silicon-containing 1,4-dialkoxy-2-butenes

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 3, 1966, 131-134

TOPIC TAGS: organosilicon compound, butene, organic synthetic process

ABSTRACT: The paper deals with the synthesis of unsaturated organosilicon monomers containing alkoxy groups in the alkyl radical. The monomers were obtained by catalytic addition of silicon hydrides to 1,4-dialkoxy-2-butene according to the reaction



where $\text{R}-\text{CH}_3, \text{C}_2\text{H}_5, \text{C}_3\text{H}_7$;
 $\text{R}'-\text{CH}_3, \text{C}_2\text{H}_5, \text{Cl}$
 $\text{R}''-\text{Cl}, \text{C}_2\text{H}_5, \text{C}_3\text{H}_7$
 $\text{R}'=\text{R}''-\text{Cl}, \text{C}_2\text{H}_5$.

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L 06159-67

ACC NR: AP6028576

The yields of the reaction products (twelve were synthesized) ranged from 47 to 51% based on the reactants. The experimental procedure is illustrated with the preparation of 2-methyldichlorosilyl-1,4-diothoxy-2-butene. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 25Jan65/ ORIG REF: 004

Card 2/2 mLE

L 39519-66 ENL (m)/T DJ

ACC NR: AR6014585 (A)

SOURCE CODE: UR/0081/65/000/021/S043/S043

AUTHORS: Kuliyev, A. M.; Levshina, A. M.; Sadykhov, Z. A.; Vedoneyeva, L. Ya.

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C

TITLE: Investigation of the synthesis of viscosity additives from oleic esters

SOURCE: Ref. zh. Khimiya, Abs. 21S264

REF SOURCE: Uch. zap. Azerb. un-t. Ser. khim. n., no. 3, 1964, 79-83

TOPIC TAGS: organic synthetic process, viscosity additive, catalytic polymerization, depolymerization, condensation reaction, oleic acid, ethylene glycol, lubricating oil / MK-8 lubricating oil, AzNII-8 viscosity additive

ABSTRACT: Polyesters (PE) were synthesized from ethylene glycol and methyl oleate dimer (D), and the products were tested as additives for lubricating oils, increasing the latter's viscosity. D was prepared by heating methyl oleate for 10-15 hours at 300C in the presence of 0.1-0.3% of anthraquinone. D was distilled at 178-180C/1-1.2 mm Hg. Molecular weight of D approximated the calculated one, acid number 12-25 mg KOH. Yield of D was 20-30%, based on the original ester. Condensation of D with 10% ethylene glycol was conducted in an N₂ atmosphere first at 120-130C, then at 200-225C for 40-45 hours in the presence of 0.1-1.5% (with respect to D) of p-toluene-sulfonic acid. The yield of the condensation product is 100% based on D, molecular weight 1000-3000 (determined cryoscopically in benzene). Addition of 10% of PE to oil MK-8 increased the latter's viscosity from 2.76 to

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L 39519-66

ACC NR: AR6014585

3.7--5.3 centistokes at 100C, the viscosity index from 60 to 114--158.5. Heating of PE in oil for 12 hours at 200C lowers the viscosity index by 9--12%. High molecular weight PE depolymerizes to a greater degree. Depolymerization of PE in oil is decreased upon addition of 3% of AzNii-8 additives. Ye. Zambrovskaya /Translation of abstract/

SUB CODE: 11, 07

SADYKOV, A. M.

"Carboniferous and Permian Deposits of Nakhichevan ASSR"
Izv. An Az. SSR, No 3, 51-65, 1954 (Azerbaydzhani resume)

The author clarifies three problems: 1. the extent of the upper Paleozoic including the middle and upper Carboniferous and Permian; 2. the character and duration of the discontinuity that preceded the upper Paleozoic; 3. the boundary of the Carboniferous and Permian using the Nakhichevan ASSR as an example. (RZ hGeol, No 6, 1954)

SO: Sum. 492, 12 May 55

SADYKOV, A.M.

~~Age of the ore-bearing formation of Atasu. Sov. geol. no. 52:99-114~~
'56. (MLRA 10:4)

(Atasu--Ore deposits)

SADYKOV, A. M.

AUTHOR: Sadykov, A.M.

11-9-10/14

TITLE: Some Remarks in Connection with N.V. Litvinovich's and M.V. Martynova's Article "On the Boundary between Devonian and Carboniferous Strata in Central Kazakhstan" (Neskol'ko zamechaniy po povodu stat'i N.V. Litvinovich i M.V. Martynovoy "O granitse Devona i Karbona Tsentral'nogo Kazakhstana")

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, 22, # 9, p 90-92 (USSR)

ABSTRACT: The paper under review was published in the "Sovetskaya Geologiya" # 45 for 1955. Litvinovich and Martynova questioned the presence of Etrén strata in Central Kazakhstan and revised the stratigraphic position of layers containing fossils of the Posidonia genus. The latter are considered by most geologists as synchronous with Etrén strata of Western Europe and placed into the Lower Carboniferous layers. Litvinovich and Martynova deny the presence in Kazakhstan of Etrén strata or their analogs. Posidonia-containing layers are included by them into Devonian system. The author criticizes the viewpoint of the paper under review and adduces some grounds for his disagreement.

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There are 6 Slavic references.

11-9-10/14

Some Remarks in Connection with N.V. Litvinovich's and M.V. Martynova's
Article "On the Boundary between Devonian and Carboniferous Strata in Central
Kazakhstan

ASSOCIATION: Institute of Geological Sciences of the AN KazakhSSR (Institut
geologicheskikh nauk AN KazSSR), Alma-Ata

SUBMITTED: 16 January 1957

AVAILABLE: Library of Congress

Card 2/2

SADYKOV, A.M.

Tectonic characteristics of the area of Atasu deposits. Izv.
AN Kazakh. SSR. Ser. geol. no.2:111-114 '58.

(MIRA 12:5)

(Atasu region--Geology, Structural)

SADYKOV, A.M.

Terekta beds of the Karaganda Basin. Dokl. AN SSSR 134 no.5:1181-1183 0 '60. (MIRA 13:10)

1. Institut geologicheskikh nauk Akademii nauk KazSSR. Predstavleno akademikom D.V. Malivkinym.
(Karaganda Basin--Geology, Stratigraphic)

SADYKOV, Anil' Mirzagainovich; BORUKAYEV, R.A., akademik, otv. red.;
KOROTKOVA, Ye.A., red.; ERAILOVSKAYA, M.Ya., red.;
BOROKINA, Z.P., tekhn. red.

[Middle Paleozoic bivalve mollusks in the Atasu region (central Kazakhstan)] Srednepaleozoiskie dvustvorchatye molliuski Atasu;
TSentral'nyi Kazakhstan. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi
SSR, 1962. 98 p. (MIRA 16:2)

1. Akademiya nauk Kazakhskoy SSR (for Borukayev).
(Atasu region—Mollusks, Fossil)

SADYKOV, A.M.

Upper Devonian epoch of the sedimentary iron-manganese mineralization
in eastern Kazakhstan. Sov.geol. 5 no.2:136-140 F '62. (MIRA 15:2)

1. Institut geologicheskikh nauk AN Kazakhskoy SSR.
(Kazakhstan--Iron ores)(Kazakhstan--Manganese ores)

SADYKOV, A.M.

Role of faulting in the localization of complex metal
mineralization in the Bestyube deposit (central Kazakhstan).
Izv. AN Kazakh. SSR. Ser. geol. 21 no.2:87-90 Mr-Ap'64.

(MIRA 17:5)

1. Institut geologicheskikh nauk imeni Satpayeva AN Kazakhskoy
SS, Alma-Ata.

BOCHKAREV, V.P., kand. geol.-miner. nauk; NIKITINA, L.G., kand. geol.-miner. nauk; SHAPIRO, S.M., kand. geol.-miner. nauk; EYDINOVA, N.M., st. inzh.; GOLOBOROD'KO, G.L., inzh.; PERLIK, G.P., inzh.; BANDALETOV, S.M., kand. geol.-miner. nauk; VLADIMIROV, N.M., kand. geol.-miner. nauk; SADYKOV, A.M., kand. geol.-miner. nauk; MALYSHEV, Ye.G., ml. nauchn. sotf.; BERKALIYEV, N.A., st. inzh.; EYDINOV, Yu.I., st. inzh.; MUKHAMEDZHANOV, S.M., kand. geol.-miner. nauk; ISABAYEV, T.T., st. inzh.; MOTOV, Yu.A., inzh.; KOLOTILIN, N.F., kand. geol.-miner. nauk; LAFIDUS, Zh.D., inzh.; SHOYMANOVA, M.M., inzh.; YAREMCHUK, G.S., inzh.; BARNOT-~~de~~ MARNI A.V., kand. miner. nauk [deceased]; MIKHAYLOV, B.P., st. inzh.; SATPAYEV, K.I., akademik, glav. red. [deceased]; MEDOYEV, G.TS., otv. red.; DMITROVSKIY, V.I., red.; SEMENOV, I.S., red.; BRAILOVSKAYA, M.Ya., red.; KORO LEVA, N.N., red.

[Irtyshe-Karaganda Canal; engineering geological conditions]
Kanal Irtyshe - Karaganda; inzhenerno-geologicheskie usloviia.
Alma-Ata, Nauka, 1965. 169 p. (MIRA 18:5)

(Continued on next card)

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX										1ST AND 2ND ORDERS									
CA Chemical analysis of <i>Ammodramus lehmannii</i> Ege. 1. G. V. Lazur'evskii and A. B. Sadykov. <i>Bull. univ. Asiæ centrale</i> 22, 171-5 (in English, 178) (1938).—The investigation of a plant from the Kaimenhsuky district of U. S. S. R. revealed the presence of 2 alkaloids, <i>sophocarpine</i>, m. 83-3°, identical with the alkaloid isolated from <i>Sophora pachycarpa</i>, and <i>ammodramine</i>, $C_{14}H_{19}O_2N_2$ (?), m. 204-5°, optically inactive, not yet described in the literature. Its picrate m. 207-8°; hydriodide, m. 188-9°. The total yield of alkaloids is 0.5%. In addn. a dye is isolated in an amt. of 3% from the above-ground part of the plant and in an amt. of 8% from the roots which dyes wool and silk a red color. Gertrude Berend										COMMON ELEMENT COMMON VARIABLE INDEX									
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1ST AND 2ND DIGITS										3RD AND 4TH DIGITS									
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17																			
<i>Ca</i> Alkaloids from <i>Fritillaria raddiana</i> Rgt. (Liliaceae). (A preliminary report.) G. V. Larus'evskii and A. Sady- kova. <i>Trudy Uchebnogo Gosudarst. Univ., Shrenik Radoi</i> <i>po Khim.</i> 13, 7-8(1939).—Dry ground <i>Fritillaria rad-</i> <i>diana</i> Rgt. bulbs (2.7 kg.) were moistened with 15% NH_4OH and extd. with dichloroethane. The dichloroethane extd. was shaken with 5% HCl, and the acid aq. soln. neutral- ized with 25% NH_4OH and extd. with potash, and extd. with ether. Distn. of the ether gave 23 g. of a yellow powder. This was heated with benzene. The benzene- insol. residue, recrystd. from alc., gave colorless needles, m. 255-7°, considered to be a new alkaloid, is given the name <i>raddianine</i>. It is insol. in water, ether, petroleum ether and benzene, sol. in hot alc. and chloroform; it contains 2 OH groups and analysis gave C 75.10, H 9.91, N 4.16 and OH 10.06%; mol. wt. 336. W. R. Henn																			
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1ST AND 2ND ORDERS										PROCESSES AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
CA										17																			
Investigation of the central Asiatic plants for the content of alkaloids. I. G. V. Lazur'evskii and A. Sadykov. <i>Trudy Uzbekskogo Gosudarst. Univ., Sbornik Trudov Khim.</i> 15, 182-98 (1939).—The paper describes 259 kinds of plants collected in expeditions (along the Angren river, Southern Kzyl-Kum, in the region of Brich-Mulla, in Chimgan) and from various botanical gardens. To detect alkaloids, the dried and ground plant (2-5 g.) was moistened slightly with 15% NH₄OH and infused for 24 hrs. with dichloroethane; 3 or 4 ml. of the ext. was shaken in a test tube with the same amt. of 3% HCl; several drops of 2% soln. of silicotungstic acid was added. Of the 250 kinds of plants investigated, 37 contained alkaloids. Those containing considerable amts. of alkaloids are: <i>Ephedra strobilacea</i> Bge., <i>E. ciliata</i> C. A. M., <i>Fritillaria raddiana</i> Rgl., <i>Ungernia trispachera</i> Bge., <i>Calligonum microcarpum</i> Borescz., <i>Aconitum talassicum</i> M. Pop., <i>A. rotundifolium</i> Kar. et Kir., <i>Dolphinium dasynthum</i> Kar. et Kir., <i>D. semibarbatum</i> Bienert., <i>Thalictrum alpinum</i> L., <i>Leontice alberti</i> Rgl., <i>Argemone polyacera</i>, <i>Ammodendron sieversii</i> Fisch., <i>Thermopsis alterniflora</i> Rgl. et Schmalh., <i>T. alpina</i> (Pall.) Led., <i>Gentiana birloufi</i> Turcz., <i>Saxifraga hircus</i> Bge., <i>S. marginata</i> Schrenk., <i>Chrysothamnus lechimskii</i> V. V. Vasil'evskii, <i>C. lechimskii</i> Led., <i>C. algaris</i> (Vred.) v. Pei., <i>C. baidarum</i> Rgl. et Schmalh., <i>Helioscopia bucharicum</i> H. Fedtch. and <i>Lycium ruthenicum</i> Murr. W. R. HENN																													
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PROCESSING AND PROPERTIES INDEX																									
1. NAME AND ADDRESS													2. AUTHOR AND OTHER CREDITORS												
<i>ca</i> Chemical investigation of <i>Fritillaria raddiana</i> RGL. A. Sadykov and G. Lazur'evskii. <i>J. Gen. Chem. (U. S. S. R.)</i> 13, 150-63(1943)(English summary). - The bulbs of <i>Fritillaria raddiana</i> extd. with CHCl_3 in the presence of 45% NH_4OH yield 1% of a new alkaloid, <i>raddanine</i>, $\text{C}_{17}\text{H}_{21}\text{N}$, m. 255-7°; perchlorate, m. 201-5° (from H_2O); hydrochloride, m. 107-8° (from EtOH); chlorosulfate, m. 130-2° (dil. HCl); methiodide, m. 249-50° (from H_2O); mono-Bz deriv., m. 235-6° (from EtOH). The alkaloid is inert to hydrolysis by boiling 20% alc. KOH. After extn. of the alkaloid, the bulbs were found to contain up to 10% usable starches, suitable for ph. production. G. M. K.																									
ASB-YEA METALLOGICAL LITERATURE CLASSIFICATION																									

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Dyes from *Ammodramus lehmanni* Bge. A. Sadykov and G. Lazur'evskii. *J. Gen. Chem. (U. S. S. R.)* 19, 300-13 (1943) (English summary).—*Ammodramus lehmanni* Bge roots in the macerated state, boiled with 2% NaOH, yield dyes on acidification of the ext. with 20% H₂SO₄; crude pptd. dyestuffs are washed with H₂O and filtered off; the yield is 14%. The superterranean part of the plant yields 4% by wt. of the same dyestuffs. The crude product on extn. with EtOH and evapn. of the latter yields a red powder, which extd. with EtOAc yields two products: sol. part, which has the formula $C_{16}H_{12}O_4$, m. 96-8° and the insol. part, which on recrystn. from EtOH is shown to be $C_{16}H_{12}NaO_4$. The 1st product heated with Ac₂O gives the *isocetyl* deriv., m. 107-9° (from MeOH). Treatment of the 1st product with KMnO₄ in alk. soln. yields oxalic acid; distn. of the dye with Zn failed to yield identifiable products; however, fusion with NaOH yielded AcOH and phloroglucinol. The 2nd dye was not studied further; however, it showed excellent dyeing properties for silk. The dyes appear to be related to mangostane isolated by Schunk (Ann. 93, 83 (1855)).

G. M. Kosolapoff

ASAC-11A METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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Alkaloids of *Ammothamnus lehmanni* Bge. A. Sadykov and G. Lashir'evskii. *J. Gen. Chem.* (U. S. S. R.) 13, 311-18 (1943) (English summary).—From *Ammothamnus lehmanni* Bge. the authors extd. a no. of alkaloids, some of which have been previously isolated from other plants. The plant was extd. with EtOH contg. 3% NH₃, the ext. concd., the residue treated with 10% H₂SO₄, filtered and the filtrate extd. with CHCl₃ for purification; the acid soln., after neutralization with NH₄OH and satn. with KOH, was extd. with Et₂O, then with CHCl₃. Conc. of the exts. gave the alkaloids as a viscous brown mass in 0.5% yield based on the dry plant weight. The Et₂O-sol. fraction on distn. in *vacuo* gave: *pachysarpine*, C₂₁H₂₇N₃O, b. 130-5°, *dipicrate*, m. 207-9° (from EtOH-Me₂CO); *HI* salt, m. 230-1° (from EtOH); *methiodide*, m. 237-9° (from MeOH). A higher-boiling fraction (b. 151-210°) was purified by soln. in EtOH and treatment with 90% HI; the HI salt was filtered off, dissolved in H₂O, treated with NH₄OH, satd. with KOH and extd. with Et₂O, the evapn. of which gave *sophosarpine*, C₂₁H₂₇N₃O₂·H₂O, m. 82-3°; *HI* salt, m. 277-9° (from EtOH). The alkaloid isolated after evapn. of the CHCl₃ ext. was purified by rubbing with Me₂CO, followed by fractional extn. with CHCl₃ at gradual degrees of acidification; the final product, m. 199-201° (from Me₂CO), had the compn. C₂₁H₂₇N₃O₂ and was named *ammothamnine*; its *picrate*, m. 212-14° (from EtOH); *HI* salt, m. 183-9° (from 90% EtOH). G. M. Kosolapoff

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<i>ca</i> New method for the isolation of lupinine from technical anabasine sulfate. A. Solykoy, and G. Lazur'evskii <i>J. Gen. Chem.</i> (U. S. S. R.) 13, 310-21 (1943) (English summary).—An improved method for isolation of lupinine was devised by the authors. The crude alkaloid mixt. from anabasine sulfate was sepd. by the Orekhov method (O. and Menshikov, C. I. 25, 3347) and distd. <i>in vacuo</i>. The low-boiling fraction, bp 136-9°, consists of lupinine and anabasine. The mixt. is dissolved in dry PhMe and treated with Na with stirring and heating. On cooling the Na lupinate is filtered off, washed with dry MePh, treated with H₂O and the mixt. extd. with petr. ether, the ext. dried and concd. to yield cryst. lupinine (97% recovery). The mother liquor after distn. yields anabasine. The use of petr. ether for washing Na lupinate also appears to give a better product than PhMe. The best results were obtained when petr. ether was used as the medium for the reaction with Na. G. M. K. <i>10</i>																																																			
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1ST AND 2ND GREEN										PROCESS AND PROPERTIES INDEX										3RD AND 4TH GREEN									
CA 17 Separation of a mixture of anabasine and lupinine in liquid NH_3 medium. A. Sadykov and N. Spasokukotskii. <i>J. Gen. Chem.</i> (U. S. S. R.) 13, 630-3 (1943) (English summary); cf. <i>C. A.</i> 38, 1241. — A satisfactory method of sepn. of anabasine and lupinine was developed for lab. and large-scale operations. A mixt. of the alkaloids and large-scale operations. A mixt. of the alkaloids (12 g.), contg. 20% lupinine, was mixed with 15 cc. liquid NH_3, (I) and treated with 0.6 g. Na in 30 cc. I; after brief shaking, Na lupinate was filtered off, washed with I and dried to give 100% recovery (2.7 g.), while the evapn. of the mother liquor and distn. of the residue gave 83.3% (8 g.) anabasine, bp 125-8°; <i>pure</i>, m. 281-3°. $NaNH_2$ can be used similarly: 0.45 g. Na and 0.025 g. Fe_2O_3 in 20 cc. I yielded the corresponding amt. of $NaNH_2$; to the mixt. was added 15 g. of the alkaliol mixt. in 25 cc. I and it was shaken for 25-30 min.; Na lupinate was recovered as above (3.3 g.), while the mother liquor yielded 90% recovery of anabasine. Either procedure was found to be applicable to large-scale operations in an autoclave; elec. cond. measurements were used as a guide for the completion of the reaction (visual observations being impossible); the yields were analogous to those of small-scale expts. G. M. Kowalski										REPT. 12-15-43																			
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380 AND 4TH ORDERS

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Syntheses with anabasine. I. Rational method of preparation of nicotinic acid from anabasine. A. Sadykov. (Mikheleaslat State Univ.). *J. Gen. Chem. (U.S.S.R.)* 15, 232-4 (1945) (English summary).—Tech. anabasine sulfate (1 kg.) was treated with strong NaOH to alk. reaction. The upper, alkaloid, layer was sepd. and the aq. layer was extd. with dichloroethane. After removal of solvent, the org. matter w. combined and distd. to yield an alkaloid mixt., b. 260-70°, contg. anabasine and lupinine; the distn. residue contains aphylline, aphyllidine, etc. The yield of the binary mixt. is 300 g., i.e. 75% of total alkaloid content. In a 3-l. flask was placed 2.1 g. (?) HNO₃ (d. 1.42) which was gradually treated with 200 g. of the binary alkaloid mixt. with agitation while warming on a steam bath until initiation of reaction; after the reaction subsided, the heating was resumed for 10-12 hrs. (until fume evolution ceased); the soln. was evapd. to dryness on a steam bath, treated with a little water, filtered, and the resulting nicotinic acid nitrate was washed with a little water; it m. 190-2° (yield 90 g.). Use of more concd. HNO₃ leads to a poorly controllable reaction. The above nitrate in 385 g. water was heated to 66° and treated with 61.6 cc. 3 N NaOH; on cooling there was obtained 45 g. (71.4%) nicotinic acid, m. 233-5° (from water). II. Derivatives of nicotinic acid. *Ibid.* 235-8.—Nicotinic acid (30 g.) was treated with 100 cc. SOCl₂ and heated on a steam bath for 4 hrs. to yield 90% nicotinyl chloride, m. 254-5°; 12.5 g. of this, 18.9 g. lupinine base, and 30 cc. pyridine, heated to 110-15° for 2 hrs., gave, after removal of the solvent, 22 g. nicotinylupinine, m. 220-8° (from EtOH); *picrate*, m. 211-12° (from EtOH); *methiodide*, m. 224° (from EtOH). Analogously, there was obtained a good yield of nicotinylanabasine, m. 248° (from EtOH); *picrate*, m. 220-1°; *methiodide*, m. 223-4° (from EtOH). Nicotinyl chloride (14.5 g.) in 30 cc. dry pyridine was treated with 17.8 g. N-methylaminoanabasine and heated for 2 hrs. on a steam bath to yield 15 g. nicotinyl-N-methylaminoanabasine, m. 231-2° (from EtOH); *picrate*, m. 227-8° (from EtOH); *methiodide*, m. 244-5° (from EtOH). G. M. Kozolapoff

COMMON VARIABLE INDEX

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Cd

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PROCESS AND PROPERTIES INDEX

Certain sulfanilamide derivatives of nicotinic acid. A. S. Sadykov and V. I. Maksimov (Mikhailo-Anatolic State Univ.). J. Gen. Chem. (U.S.S.R.) 10, 1719-20 (1946).—In view of the partial control of the toxic effects of sulfa drugs by administration of nicotinic acid, several derivatives of sulfa drugs contg. a nicotinic acid residue were prepd. Sulfanilamide (7.2 g.) in 30 cc. pyridine bases (crude) was treated with 7 g. nicotineyl chloride (I) and the mixt. was heated on a steam bath 2 hrs.; after removal of the solvent in vacuo and diln. with H₂O, the crude product was purified by crystn. from 50% EtOH, then from EtOH, to yield N'-nicotinylsulfanilamide, m. 256-7° (84.6%), identical with the Crumley, et al., product (C.A. 34, 3922). I (28.8 g.) in 100 cc. pyridine bases was treated with 42 g. p-AcNHCH₂SO₂NH₂, and heated on a steam bath for 3 hrs.; after diln. with water, 45 g. N'-nicotinyl-N'-acetylsulfanilamide, m. 213-15° (from 50% EtOH) (methoxide, m. 100-7° (from EtOH)) was obtained; the Ac group is readily removed by hydrolysis; talmed; the Ac group is readily removed by hydrolysis; talmed; the Ac group is readily removed by hydrolysis; talmed.

removal of the solvent in vacuo 20 g. 2-nicotinylamino-pyridine, m. 230° (from EtOH) (picrate, m. 220-1° (from EtOH)); methoxide, m. 192-3° (from EtOH) was obtained. I (7.2 g.) in 25 cc. pyridine bases and 12 g. sulfapyridine heated on a steam bath 3 hrs. yielded after diln. with water 12 g. N'-nicotinyl-N'-(3-aminopyridyl)sulfanilamide (nicotinylsulfapyridine), m. 183-5° (from EtOH); picrate m. 149-50° (from EtOH); methoxide m. 220-0° (from EtOH). I (14.2 g.) in 50 cc. pyridine bases and 10.8 g. sulfaguanidine heated on a steam bath 2 hrs. yielded dimethylsulfolguanidine, m. 210-30° (from 50% EtOH), similar in 12-g. yield; picrate m. 191-2° (from EtOH); similar reaction, using N'-acetyl-sulfaguanidine, gave 12 g. nicotinyl deriv. (from 7.2 g. I), m. 254-5° (from 50% EtOH).

sulfa-4-methylthiole gave the N'-nicotinyl deriv. (18 g. PhNHCl, and 10 g. PCl₅ were heated to 200-10° 4 hrs.; on cooling, dilg. with 200 cc. H₂O, and making

alk. with 60% NaOH there was obtained *N*-phenyl-*N*-ethylsulfonamide, b.p. 185-90°, m. 83° (from Me₂CO); *picrate* m. 154-5° (from EtOH); *methiodide* m. 137-7.5° (from EtOH). PhNH₂ (121 g.) treated, with cooling, with 78.5 g. AlCl₃ gave 150 g. *N*-Ac deriv., m. 83°, which was treated at 25-5° with 350 cc. C₂H₅OH; the mixt. was heated to 60-70° 3 hrs., poured on ice, and filtered to yield 200 g. *p*-(*N*-ethylsulfonamido)benzenesulfonyl chloride, m. 130-40° (from (CH₃Cl)₂); this was added slowly to 300 g. concd. NH₄OH to yield 150 g. *p*-(*N*-ethylsulfonamido)benzenesulfonamide, m. 123-4° (from water). The latter (50 g.) in 150 cc. 20% HCl was heated to 65-70° for 3 hrs., to yield on cooling and neutralization with Na₂CO₃, *N*-ethylsulfonamide, m. 110-1°. When this (5 g.) and 3.6 g. I were heated on a steam bath 4 hrs. in 20 cc. pyridine there was obtained, after the removal of the solvent *in vacuo*, 5.6 g. *N*-acetyl-*N*-ethylsulfonamide, m. 229-30° (from 70% EtOH); *picrate* m. 218° (from EtOH); *methiodide* m. 214-15° (decampn.) (from EtOH); the prepn. was continued by a similar condensation of I with the *N*-acetyl-*N*-ethyl deriv. to yield *N*-acetyl-*N*-ethyl-*N*-acetyl-sulfonamide, m. 242-3° (from EtOH), which on hydrolysis with 20% HCl for 5 hrs. at 65-70° gave a product identical with that of direct condensation. G. M. K.

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Syntheses from anabasine. III. Condensation of aliphatic oxides with anabasine. A. Sadykov and N. Anbrapova. *J. Gen. Chem.* (U.S.S.R.) 17, 1212-15 (1947) (in Russian); cf. *C.A.A.* 40, 2159. —Anabasine (81 g.) in 200 cc. MeOH allowed to stand 36 hrs. at 20° with 35 cc. ethylene oxide gave 63% *N*-2-hydroxyethylanabasine, b_p 174-6°, sol. in H₂O, CHCl₃, MeOH, EtOH, Me₂CO, difficultly sol. in Et₂O or petr. ether; picrate m. 180-80.6° (from MeOH). Anabasine (124 g.) in 200 cc. MeOH after standing 24 hrs. with 70 g. propylene oxide gave 15.5% *N*-(2-hydroxypropyl)anabasine, b_p 165-70°, a repetition of the prepn. in which 227 g. anabasine and 125 g. propylene oxide were mixed in 350 cc. MeOH with cooling to moderate the reaction and allowed to stand 36 hrs. gave 52% of purer product, b_p 177-9°; *HCl* salt m. 168-70° (from EtOH-Et₂O); this on treatment with 40% NaOH and extr. with CHCl₃ gave the pure base, b_p 178-9°, which crystd. on standing and m. 68-9°, sol. in aq. alics. and CHCl₃, poorly sol. in H₂O and Et₂O; picrate m. 189-90° (from MeOH); phenylurethan m. 110-11° (from EtOH); 1 g. of the base with 2 g. alk. KMnO₄ gave anabasine, while 15 g. KMnO₄ per 1 g. of the base in conc. H₂O at room temp., followed by boiling, gave nicotine acid, m. 233-4°.

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Syntheses from anabasine. IV. Comparative oxidation of anabasine by various oxidants. A. Sadykov, *J. Gen. Chem. (U.S.S.R.)* 17, 1710-13(1947)(in Russian); cf. C.A. 42, 1001d. -- Freshly distd. nicotine (8.1 g.) in 50 cc. dry dioxane and 5.0 g. SeO_2 in 30 cc. dioxane were heated to 140-60° 5 hrs.; the reaction was vigorous and much CO_2 evolved; the cooled soln., filtered to remove Se and distd., gave 40.4% *normicotine*, b. 135-7°, and 40.3% nicotine, b. 147-50°. The former gives a dipicrate, m. 185-7° (from KOH), and a chloroplatinate, m. 280-3° (from 10% HCl). N-Methylanabasine (10 g.) in 50 cc. dioxane, treated at 140-50° with 0 g. SeO_2 in 40 cc. dioxane, heated 4 hrs., and treated as above, gave 48% anabasine, b. 120-1°, and 33% N-methylanabasine, b. 130-5°. N-Methylanabasine (8 g.) in 30 cc. 2 N H_2SO_4 was electrolytically oxidized (48 hrs.) in a semipermeable cell, using Pt electrodes of 0 sq. cm. area, 1.5 amp., with ice-water cooling of the cell and stirring of the cell content. The soln., carefully neutralized with 25% NH_4OH , mixed with satd. Cu acetate soln., and allowed to stand overnight, gave Cu nicotine, which, after decompn. by H_2S , yielded 15% *nicotinic acid*, m. 230-1° (from water). Anabasine (10 g.) in 300 cc. 35% H_2SO_4 , on a water bath was treated over 5 hrs. with stirring with 68 g. MnO_2 , heated 10 hrs. longer, filtered hot, made alk. with 40% NaOH , filtered, cooled, to a small vol., acidified by 10% HCl (to Congo red), treated with 4 g. Na_2HPO_4 , and evapd. to dryness; extr. with several portions of hot BuOH gave 45.3% *nicotinic acid* on cooling; the acid, after treatment with charcoal and crystn. from EtOH , m. 232-4° when mixed with an authentic sample.

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ASAC-11A METALLURGICAL LITERATURE CLASSIFICATION

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SADYKOV, A. S.

12 to 15 May 1948, Moscow, first conference was held on history of Chemistry, Acad Sci USSR. Many papers were presented by (ostensibly) members of this Commission.

"Problem of the Development of Chemistry in Central Asia" (Central Asiatic State U, Tashkent)

"Materials on the History of Soviet Chemical Science," published by Acad Sci USSR in Moscow-Leningrad 1950.

■ #283498

ADITYA, A.S.

Aditya, A.S. "A study of the fission reaction of anabasins", Izvestiya Akad. nauk UzSSR, 1948, No. 4, p. 3-10, (Resume in Uzbek), - Bibliog: 14 items.

SC: U-3042, 11 March 53, (letopis 'nykh Statey, No. 10, 1949).

SADYKOV, A. S.

28278

K voprosu ob urlyerõsnosti khardzhumansaiskogo grabyena. Doklady akad nauk
ussr, 1949, No. 6. S. 11-13 - ryezurye na uzbyek. yaz.

SO: LETOPIS NO. 34

SADIKOV, A.S., deystvitel'nyy chlen.

New method for the synthesis of chromium fluoride. Dokl.AN Uz.SSR no.12:
27-29 '49. (MLRA 6:5)

1. Institut khimii AN Uz.SSR (for Talipov, Antipov).
2. Akademiya Nauk Uzbekskoy SSR (for Sadykov). (Chromium fluoride)